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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,875	08/24/2001	Densen Cao	5045.5 P	2495

7590 08/27/2002

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EXAMINER

GEYER, SCOTT B

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,875

Applicant(s)

CAO, DENSEN

Examiner

Scott B. Geyer

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention:

A first (1st) embodiment of a semiconductor light source using a high power chip or array arrangement detailed in figure 1;

A second (2nd) embodiment of a semiconductor light source using high power surface mount LED chip modules or lamps detailed in figure 2;

A third (3rd) embodiment of a LED with an insulating substrate detailed in figure 3A;

A fourth (4th) embodiment of a LED structure on a sapphire substrate detailed in figures 3B and 3D;

A fifth (5th) embodiment of a LED with a conducting substrate detailed in figure 3C;

A sixth (6th) embodiment of a VCSEL chip on an insulating substrate detailed in figures 3E and 3F;

A seventh (7th) embodiment of a VCSEL chip on a conductive substrate detailed in figures 3G and 3H;

An eighth (8th) embodiment of a LED array on a single chip with an insulating substrate detailed in figure 4A;

A ninth (9th) embodiment of a LED array on a single chip with a conductive substrate detailed in figure 4B;

A tenth (10th) embodiment of a VCSEL array on a single chip with an insulating substrate detailed in figure 4C;

An eleventh (11th) embodiment of a VCSEL array on a single chip with a conductive substrate detailed in figure 4D;

A twelfth (12th) embodiment of a semiconductor chip that emits single color light using a conversion layer detailed in figure 5A;

A thirteenth (13th) embodiment of a semiconductor chip that emits single color light using a phosphor coating detailed in figure 5B;

A fourteenth (14th) embodiment of a heat sink using a fan and TE cooler to circulate air detailed in figure 6;

A fifteenth (15th) embodiment of a single chip or single chip array package detailed in figure 7A;

A sixteenth (16th) embodiment of a multi-chip package detailed in figure 7B;

A seventeenth (17th) embodiment of a chip package with phosphor covering on the package detailed in figure 8A;

An eighteenth (18th) embodiment of a chip package with a uniform phosphor coating detailed in figure 8B;

A nineteenth (19th) embodiment of a high power LED package detailed in figure 9;

A twentieth (20th) embodiment of a LED or laser light source located in a light enclosure having a phosphor coating detailed in figure 10;

A twenty-first (21st) embodiment of a power supply module with fitting for a light source detailed in figure 11.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, none of the claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Conclusion

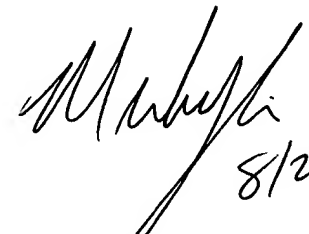
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott B. Geyer whose telephone number is (703) 306-5866. The examiner can normally be reached on weekdays, between 10:00am - 6:30pm. The examiner may also be reached via e-mail: **scott.geyer@uspto.gov**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Sherry can be reached on (703) 308-1680. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.B.G.

S.B.G.
August 22, 2002


8/23/02
MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800